



Appendix B

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CONSTRUCTION PLANS CHECKLIST

1. GENERAL DRAFTING STANDARDS

- Maximum sheet size shall be 24 inches x 36 inches.
- All text shall be legible. No text shall be printed over other text.
- Text should be relocated from areas with congestion or numerous line types.
- No text shall be less than 0.10 in height.
- All existing improvements, including lot lines, ROW lines, etc., shall be dashed or grey.
- Any existing improvements, contours, lot lines, ROW lines, etc. shall continue past the boundary lines at least 100 feet.
- Each sheet shall have a title block with the name of the subdivision, sheet purpose, and sheet number.
- Original and revision dates on all sheets. Sheets containing plan views shall contain a north arrow, bar scale and written scales for horizontal and vertical if appropriate.
- The boundary should always be in a heavy line type.
- Acceptance signature blocks shall be included on the cover sheet.
- Plans shall be checked, sealed, signed, and dated by a PE.
- Include UNCC "Call before you dig" graphic and phone number on each page of the plans.

2. COVER SHEET

- Project Name
- All general notes for entire project.
- Vicinity or location map with site denoted and streets, parks schools, etc. labeled.
- Legend
- Benchmark description including reference to datum (NAVD88). Descriptions shall be sufficient to provide for locating monuments.
- Basis of bearings, section, or control line information including all aliquot corners.
- Sheet Index.
- List of Contacts.
- Engineer's signature block.
- Owner, engineer, and developer's name, address, and telephone numbers.
- City acceptance signature block.

3. BASE DRAWING, GENERAL CONTENTS FOR ALL PLAN, AND PLAN AND PROFILE SHEETS

- Horizontal Scale: 1 inch = 50 feet or larger. Vertical Scale: 1 inch = 5 feet or larger.
- Match lines labeled with corresponding sheet number.
- Existing and proposed ROW, easements, and property lines, on and adjacent to the site.
- Label street names. Denote all lot numbers and blocks.
- Curb and gutter, sidewalk, and alleys.
- Beginning station tied and referenced to section line or control line.
- Index map depicting sheet location within overall site.

4. PHASING PLAN - IF APPLICABLE

- Denote the phases in heavy lines and large lettering.
- Draw and label any temporary traffic signage required for proposed phasing.

5. GRADING PLAN

- Existing site topography extending a minimum 100 feet past property limits.
- Existing and proposed curb and gutter, sidewalk, bike paths, alleys, and other improvements including irrigation ditches, drainage swales, and structures.

- Location of fixed objects and physical features (wetlands, trees, poles, fences, buildings, retaining walls, etc.).
- Label all improvements such as structures. Cross-sections and details may be necessary to adequately describe improvements.
- Show and label driveway grades and dimensions.
- 100-year floodplain and floodway lines and flood elevations if applicable.
- Label all proposed and existing top of foundation elevations on and adjacent to the site.
- Existing contours (2.0 foot maximum interval).
- Proposed contours (2.0 foot maximum interval). Line types should be heavier than the existing. Index contours should be heavier than others. Show match with existing contours.
- Label street slopes, grade breaks, and approximate high and low point locations.
- Spot elevations at all property corners.
- Survey control points with elevations and coordinates.
- Drainage designation for each lot. Show drainage flow arrows and include FHA drainage designation (“A”, “B”, or “G”) for each lot.
- Where parking lots, special entrances, trash enclosures, special structures, etc., are to be constructed, spot elevations should be added at all points where curb or concrete directions change.
- Do not include existing or proposed utilities.

6. EROSION CONTROL PLAN

- Proposed silt fence and other erosion control devices.
- Detail measures to be taken to limit both wind- and water-borne erosion

7. OVERALL OR MASTER UTILITY PLAN

- Existing utilities both on and adjacent to site.
- Proposed utilities (including irrigation systems) on and adjacent to the site. Draw proposed utilities in a heavier weight than the existing. Include all manholes, fire hydrants, valves, inlets, irrigation structures, etc.
- Proposed points of connection for water and sewer.
- Proposed abandonment of any existing lines.
- Draw at an appropriate scale so utilities are distinct and drawing is not cluttered.

8. SIGNAGE, STRIPING AND LIGHTING PLAN

- The signage, striping, and lighting items set forth on this sheet shall be set in a heavier line weight and shall be appropriately labeled.
- Pavement markings shall include lane lines, cross walks and stop bars, lettering, and symbols. Dimension lane widths.
- A sign table shall be included listing all signs, their MUTCD designation, and number required.

9. STREET PLAN AND PROFILE PLAN

- Existing street improvements for full width of street plus 50' beyond construction limits.
- Proposed street improvements, curb and gutter, sidewalk, bike paths, and alleys. Curb types, pan widths, etc., should be denoted on the plan.
- Limits of construction noted.
- Curve layout information including radius, length of curve, central or deflection angle, stationing of point of curvature (PC) and point of tangent (PT).
- Plan view shall denote ROW widths, flow line to flow line widths, flow line spot elevations at intersections, cul-de-sacs, eye-brows, and the beginning and ending of horizontal curves along with stationing at any alignment changes. If plan is too cluttered with spot elevations, intersection details shall be provided.
- Proposed storm sewer inlets shall be denoted in the plan view.

- Profile view shall contain a minimum of one profile, that being the centerline. Whenever the street cross section varies from the standard section, other profiles or cross-sections should be added to clarify, including flow line profiles for curb returns and cul-de-sacs. Cross-sections shall be provided for arterial and major collector streets, as well as for widening of existing streets.
- Profiles shall extend a minimum 100 feet beyond limits of construction. Cross-sections shall extend a minimum 25 feet beyond construction limits.
- If centerline profile is used, a distance and slope should be denoted on the profile view for all horizontal curves at flow lines.
- Existing and proposed profiles should be shown and labeled. Existing profiles shall be in a dashed line type. Vertical curve data shall include beginning and ending grades, length of curve, stationing for point of vertical curvature (PVC), point of vertical inflection (PVI) and point of vertical tangent (PVT).
- Do not include existing or proposed contours or utilities in plan view.

10. UTILITY PLAN AND PROFILE

- Separate plan and profile sheets shall be provided for water, sanitary sewers, storm sewers, stormwater channels, non-potable water, and irrigation pipelines and ditches.
- Show all existing and proposed utilities including valves, fire hydrants, manholes, inlets, and appurtenances in the plan view.
- Draw proposed subject utility with a heavy line weight.
- Draw and label any proposed connections to the existing systems.
- Draw and label any proposed and existing service connections, by station, in the plan view.
- Include any benchmarks and horizontal control points.
- Label and draw the pipe alignment with stationing, pipe size, and type of material, pipe class and length between fittings or manholes on the plan and profile views.
- Profiles should accurately depict the existing and proposed grades above pipes.
- The profiles should depict all proposed crossings with other existing or proposed utilities. Label all crossings with the type of utility and size and elevation if known.
- The profiles for the water lines shall denote the top of pipe elevations for all fittings.
- The profiles for sewer lines shall denote manhole rim elevations along with the various invert elevations.
- Stations that correspond to any pipe appurtenances including air relief valves, pressure reducing valves, blow-offs, lift stations, and clean-outs.
- Show any special thrust restraint.

11. DETAIL SHEETS

- Typical sections shall be provided for all streets showing all improvements and dimensions. This shall include the pavement design.
- Include special details for any item not clearly described or labeled in the Construction Plans or Design Criteria manuals. This is particularly true for drainage channels, rip-rap areas, irrigation structures, retaining walls, and all other non-standard structures, etc.

12. GENERAL NOTES

The following general notes shall be included on construction plans as applicable:

- All work within the public ROW or easement shall conform to the City of Evans Construction and Design Specifications.
- The Contractor is responsible for obtaining all required permits prior to commencement of any work on the project. A permit from Public Works is required for all construction in public ROW or easements. A preconstruction conference shall be held with City representatives before a permit will be issued.
- The Contractor shall notify the City Project Representative at least 24 hours prior to desired inspection.
- It is the contractor's responsibility to notify the owner/developer, and the City, of any problems in conforming to the accepted plans for any element of the proposed improvements, prior to its construction.

- It is the responsibility of the Developer during construction activities to resolve construction problems due to changed conditions, or design errors encountered by the Contractor during the progress of any portion of the project. If, in the opinion of the City, the modifications proposed by the Developer, to the accepted plans, involve significant changes to the character of the work, or to the future contiguous public or private improvements, the Developer shall be responsible for resubmitting the revised plans to the City of Evans for acceptance prior to any further construction related to that portion of the project. Any improvements not constructed in accordance with the accepted plans, or the accepted revised plans, shall be removed and reconstructed according to the approved plan.
- The Contractor shall be solely and completely responsible for the conditions at and adjacent to the job site, including safety of all persons and property, during the performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours. The duty of the City to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site
- The Contractor shall provide all lights, signs, barricades, flag persons, or other devices necessary to provide for public safety in accordance with the current Manual on Uniform Traffic Control Devices.
- The Contractor is responsible for the protection of all survey monuments. Any monument that must be destroyed for construction shall be replaced by a registered land surveyor. The Contractor shall engage the services of a licensed Surveyor prior to disturbing any monuments.
- Prior to final placement of surface pavement, all underground utility mains shall be installed, tested and accepted, and service connections stubbed out beyond the property line, when allowed by the utility. Service from public utilities and from sanitary sewers shall be made available for each lot in such a manner that will not be necessary to disturb the street pavement, curb, gutter, and sidewalk when connections are made.
- Copies of record drawing plans shall be submitted to the City of Evans prior to initial acceptance of the public improvements.



SCHEDULE FOR QUALITY CONTROL SAMPLING AND TESTING

IDENTIFICATION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING/TESTING FREQUENCY
Sewer/Water Line Compaction	Moisture/Density Curve % Compaction % Moisture	One per soils type Mainline: One test every 200 l.f. every other lift Water Service: One test per service. Sewer Service: Minimum of two tests per service or at inspectors' discretion. Water Valve/Manhole: One test each lift. Test opposite sides.
Storm Sewer Compaction	Moisture/Density Curve % Compaction % Moisture	One per soils type Mainline: One test every 200 l.f. every other lift Service: One test per service. Every other lift
Structural Backfill	Moisture/Density Curve % Compaction % Moisture Gradation	One per soils type 1 per 100 yd ³ or fraction there of. Minimum 1 per structure. 1 per 200 yd ³ or fraction there of.
Embankment Compaction	Moisture/Density Curve Gradation % Compaction % Moisture	One per soils type One test per 450 yd ³ or fraction there of, and/or each lift placed shall be tested.
Filter Material/Bed Course Material	Gradation	One per type
Aggregate Base Course	Moisture/Density Curve Gradation % Compaction % Moisture	One per class One test every 250 l.f. staggered and on center line.
Hot Bituminous Pavement	Design Check Extraction/Gradation Marshall/Rice Density	One per project One sample each day. Depending on project size. At least one sample per project One core per 500 l.f.
Conc. Sampling & Testing for Structure Concrete	Slump Air Content Temperature Compressive Strength Gradation	One slump, air content, temp. & 5 cylinders for each 100 yd ³ or fraction there of or at the inspectors discretion (2 @ 7 Days. 2 @ 28 Days) One per source
Concrete Sampling & Testing for Sidewalks, Bike paths	Slump Air Content Temperature Compressive Strength Gradation	One slump; air content, temp. and 5 cylinders for each 1000 yd ² Placed or fraction there of or at inspectors discretion (1 @ 7 Days. 2 @ 28 Days) One per source
Conc. Sampling & Testing for Curb & Gutter	Slump Air Content Temperature Compressive Strength Gradation	One slump, air content, temp. & 5 cylinders for each 1500 l.f. or fraction there of or at the inspectors discretion (2 @ 7 Days. 2 @ 28 Days) One per source